

described by the following article, which is also incorporated by reference herein:

IEEE J. Quantum Electron., 26(1990), p. 2025.

5 Jonsson, B.; Eng, S.T.:

"Solving the Schrödinger Equation in Arbitrary Quantum-Well Potential Profiles  
Using the Transfer Matrix Method".

#### Summary of the Invention

10 The present invention is directed to the calibration of a spacial scale (spatial  
coordinates) of technical devices, which work on the basis of high-resolution and  
ultrahigh-resolution imaging processes. These are imaging processes based on  
particle flows, such as scanning electron microscopy, scanning transmission electron  
microscopy, or scanning probe microscopy (atomic force microscopy, scanning  
15 tunneling microscopy).

The technical task at hand is to provide a scale which will enable the technical  
devices mentioned above to be calibrated with very high precision. The present  
invention achieves this objective by enabling scales to be manufactured and calibrated  
in the nanometer range.

20 More particularly, the present invention provides a scale in the nanometer  
range for technical devices which are used for the high-resolution or  
ultrahigh-resolution imaging of structures characterized in that:

- 25 -a to construct the scale, at least two different crystalline or amorphous materials  
are used for the heterolayer structure, which are easily distinguished from one  
another by their contrast when they are imaged using high-resolution or  
ultrahigh-resolution imaging methods; that
- b the different crystalline or amorphous material layers used are deposited by  
means of a material deposition method in the deposition direction, one after  
30 another in alternating sequence onto a substrate material, as a heterolayer